

## Bachelor/Master Thesis:

# Two-photon lithography based photonic packaging solutions at angled facets

Many modern III-V semiconductor gain chips are designed with angled facets, in order to reduce unwanted backreflections. This poses an additional challenge for photonic packaging.

We are looking at advanced two-photon lithography based solutions for photonic packaging at angled facets, i.e. specially designed 3D-printed micro lenses and photonic wirebonds. These research activities will also be within the scope of the EU-project PIXXAP [1].

[1] <https://www.pixxap.eu/>

### Your tasks:

- Simulation and optimization of lenses and/or PWBs for angled facets
- (Machine vision assisted) 3D-lithography fabrication
- Experimental validation of coupling efficiency

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